



Pre Plugging Methane Quantification Test Report

Report Prepared By Curtis Shuck

Start Date: Tue Dec 20 2022 21:42:24 GMT+0000
 (Coordinated Universal Time)
End Date: Wed Dec 21 2022 20:05:52 GMT+0000
 (Coordinated Universal Time)
Test Time Subset: 2022-12-20T21:42:24.000Z -
 2022-12-21T20:04:54.903Z
Device: VB100-0039
Well Licensee: NMOCD
Well Name: OBRIEN P 002
UWI: 30-005-62247
Well License Number: 30-005-62247
Surface Location: CHAVES COUNTY
Bottom Hole Location: UNKNOWN
Test Operator: F.V.
Authorized By: NMOCD
Test Reason: IIJA/PRE PLUG
Scope Of Work: 12-hr
AFE Number: 52100-0000072998
GPS: 33.59638,-103.99642
Notes: MONITORING CASING FLOW

Orphan Well Flow Test Results

Average Flowrate	Average Flow Temperature	Average Flow Pressure	Flow Duration	Methane Concentration	Methane Emissions	Benzene
0.0006 scf/hr	35.24 °F	0.2555 psi	1342.52 min	null %	null g/hr	N/A ppm

Annual Emission Rate = ($\bar{x}Q_{measured}$) x (Conc_{measured}) x p x 0.454 x 8,760

Methane Calculation:

($\bar{x}Q_{measured}$) 0.0006 scf/hr x (Conc_{measured}) null= null scf CH₄/hr

Methane Flow x (p) x .0423 x .454 x 8,760 = null CH₄ kg/yr Emission Rate

Where:

$Q_{measured}$ - scf/hr total measured flow

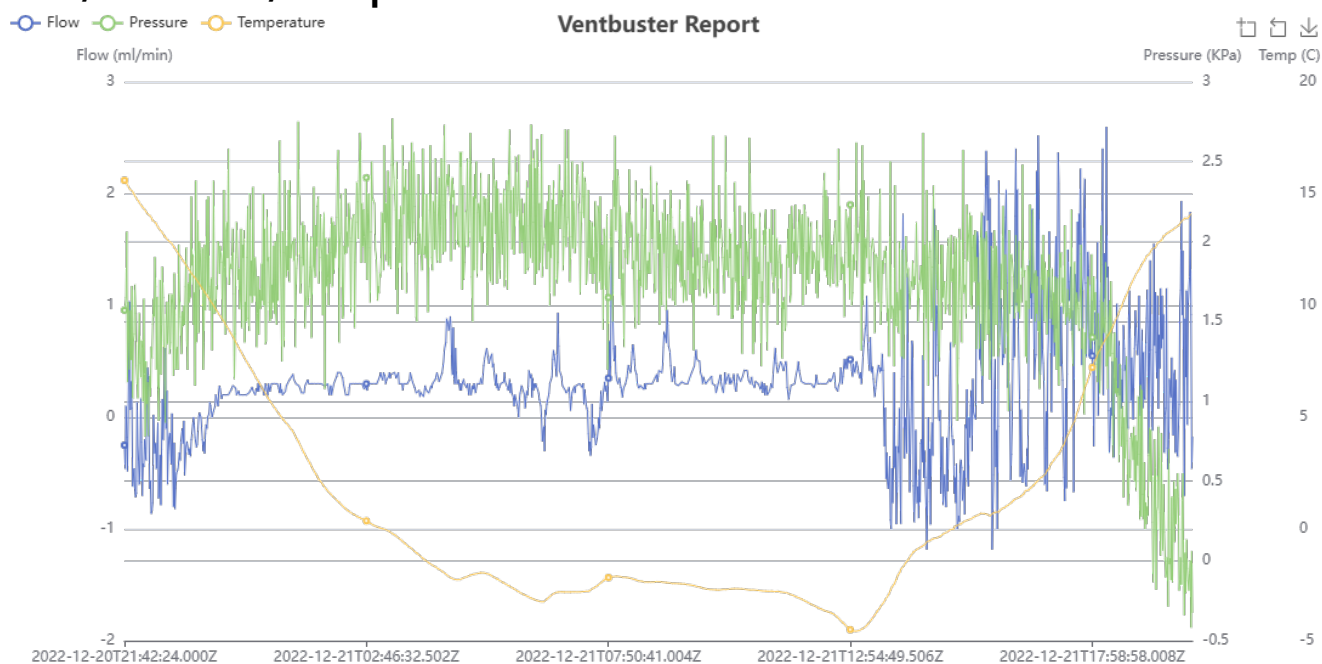
Conc_{measured} - methane concentration measured

p - 0.0423 methane density at 1 atm; 60° F

0.454 - Conversion from lb to kg

8760 - Conversion from hr to yr

Flow/Pressure/Temperature Timeseries



Site Photos



www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

15739G	OBrien P #002	OBrien P #002	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2023062781	Tedlar Bag	FV - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Dec 21, 2022 13:00	Dec 21, 2022 13:00	Jan 17, 2023 13:59	Jan 17, 2023
Date Sampled	Date Effective	Date Received	Date Reported
Luis			
Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
Well Done Foundation		NG	
Operator		Lab Source Description	

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	79.3080	79.30821	
CO2 (CO2)	0.3940	0.39403	
Methane (C1)	14.1550	14.15482	
Ethane (C2)	1.4310	1.43106	0.3830
Propane (C3)	0.6850	0.68472	0.1890
I-Butane (IC4)	0.0970	0.09718	0.0320
N-Butane (NC4)	0.2880	0.28797	0.0910
I-Pentane (IC5)	0.1570	0.15669	0.0570
N-Pentane (NC5)	0.2610	0.2611	0.0950
Hexanes Plus (C6+)	3.2240	3.22423	1.3990
TOTAL	100.0000	100.0000	2.2460

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Analyzer Information			
Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Jan 3, 2023

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
381.5	375.9	382.4	376.8

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.9994	0.9986
Molecular Weight	
28.9232	

C6+ Group Properties		
Assumed Composition		
C6 - 60.000%	C7 - 30.000%	C8 - 10.000%

Field H2S
0 PPM

PROTREND STATUS:

Passed By Validator on Jan 18, 2023

DATA SOURCE:

Imported

PASSED BY VALIDATOR REASON:

First sample taken @ this point, composition looks reasonable

VALIDATOR:

Brooke Rush

VALIDATOR COMMENTS:

OK

Source	Date	Notes
Brooke Rush	Jan 18, 2023 11:46 am	Methane = 141,550 PPM

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

DEFINITIONS

Action 495001

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Operator: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038	OGRID: 269864
	Action Number: 495001
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

DEFINITIONS

The Orphan Well Mitigation Activity (OMA) forms are a subset of the OCD's forms exclusively designed for activities related to State of New Mexico's contracted plugging and reclamation activities. Specifically, these forms are used for orphan wells or associated facilities which are in a "Reclamation Fund Approved" status. This status represents wells or facilities where the OCD has acquired a hearing order allowing the OCD to perform plugging or reclamation on wells and associated facilities that no longer have a viable operator to perform the necessary work. These forms are not to be utilized for any other purpose.

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QUESTIONS

Action 495001

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	Action Number: 495001
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

Prerequisites	
[OGRID] Well Operator	[269864] CANYON E & P COMPANY
[API] Well Name and Number	[30-005-62247] O'BRIEN P #002
Well Status	Reclamation Fund Approved

Monitoring Event Information	
<i>Please answer all the questions in this group.</i>	
Reason For Filing	Pre-Plug Methane Monitoring
Date of monitoring	12/20/2022
Latitude	33.5964508
Longitude	-103.9962234

Monitoring Event Details	
<i>Please answer all the questions in this group.</i>	
Flow rate in cubic meters per day (m ³ /day)	0.00
Test duration in hours (hr)	22.4
Average flow temperature in degrees Celsius (°C)	1.8
Average gauge flow pressure in kilopascals (kPag)	1.7
Methane concentration in part per million (ppm)	141,550
Methane emission rate in grams per hour (g/hr)	0.01
Testing Method	Steady State

Monitoring Contractor	
<i>Please answer all the questions in this group.</i>	
Name of monitoring contractor	WELL DONE NEW MEXICO LLC